

Appln. Ser. No. 10/620,046
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This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Currently Amended): A ZIF connector comprising an insulator, a contact held by said insulator, and an actuator slidably held by said insulator, said contact comprising;

a stationary portion fixed to said insulator;

a first portion having a first contact point and being continuous with said stationary portion;

a substantially U-shaped portion continuous with said first portion;

a second portion having a second contact point and being continuous with said substantially U-shaped portion; and

a movable portion continuous with said second portion and engaging with said actuator, said first and said second contact points confronting each other with a gap left therebetween, said movable portion confronting said stationary portion and extending longer than said stationary portion, and said actuator sliding to displace said movable portion so that said first and said second contact points sandwich therebetween a connection counterpart that is inserted in said gap.

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Claim 2 (Original): The ZIF connector according to claim 1, wherein said first and said second portions are preformed to have intermediate portions, respectively, which are approached to each other to make said gap become small.

Claim 3 (Original): The ZIF connector according to claim 1, further comprising guides extending from said first and said second contact points, respectively, for introducing said connection counterpart into said gap.

Claim 4 (Original): The ZIF connector according to claim 1, further comprising a lock mechanism coupled to said actuator for locking a state where said connection counterpart is sandwiched between said first and said second contact points.

Claim 5 (Original): The ZIF connector according to claim 1, further comprising a driving screw screwed in said insulator and coupled to said actuator for moving said actuator relative to said insulator.

Claim 6 (Original): The ZIF connector according to claim 1, further comprising a cam portion rotatably held by said insulator

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and coupled to said actuator for moving said actuator relative to said insulator.

Claim 7 (Original): The ZIF connector according to claim 6, further comprising a lock mechanism coupled to said cam portion for locking a fitted state where said connection counterpart is sandwiched between said first and second contact points.

Claim 8 (Original): The ZIF connector according to claim 7, wherein said lock mechanism comprises:

a cam lock operating portion formed integral with said cam portion and having a lock groove provided at a peripheral portion of said cam lock operating portion; and

a retaining spring held by said insulator for engaging with said lock groove in dependence on an operating position of said cam lock operating portion to make said cam lock operating portion be prevented from being moved to release said fitted state.

Claim 9 (Original): The ZIF connector according to claim 8, wherein said cam lock operating portion has an operating position indicator showing an operating position of said cam lock

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operating portion, said insulator having, in the vicinity of said cam lock operating portion, logo portions representing a lock position and an unlock position.

Claim 10 (Original): The ZIF connector according to claim 7, wherein said cam lock mechanism is arranged so as not to project from the surface of said insulator.

Claim 11 (Currently Amended). A ZIF connector comprising:
an insulator holding a plurality of first contacts;
an actuator slidably holding by said insulator; and
a cam mechanism having a cam portion,
wherein, when said cam portion is operated to slide said actuator, said actuator displaces movable portions of said first contacts so that said first contacts and a plurality of second contacts of a connection counterpart are brought into a fitted state where said first contacts are connected to said second contacts, respectively, and

~~wherein said ZIF connector further comprises a cam lock mechanism for retaining said fitted state;~~

said cam lock mechanism comprising:

a cam lock operating portion that is formed integral with

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said cam portion, disposed at a predetermined portion of said insulator so as to be exposed to the exterior, and operated so as to correspond to a change of a state including said fitted state and a disengaged state where said first and second contacts are non-connected to each other; and

a plate-like retaining spring that is disposed in a spring groove provided on said insulator in the vicinity of said cam lock operating portion, and has one end portion which is flexible and engages with a lock groove provided at a peripheral portion of said cam lock operating portion depending on an operating position of said cam lock operating portion, and the other end portion fixed to said insulator,

wherein, when said cam portion is operated to slide said actuator to provide said fitted state, said cam lock operating portion moves, being unified with said cam portion, in one direction so that said one end portion of said retaining spring engages with said lock groove, thereby to automatically lock said cam mechanism.

Claim 12 (Canceled).

Claim 13 (Currently Amended): The ZIF connector according

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to claim ~~12~~ 11 wherein, upon releasing said fitted state, said one end portion of said retaining spring is pushed in a direction opposite to a biasing direction toward a wall of said lock groove so as to release engagement between said retaining spring and said lock groove, then in this state, said cam lock operating portion is moved in a direction opposite to said one direction, thereby to simultaneously move said cam portion to release said fitted state.

Claim 14 (Original): The ZIF connector according to claim 13, wherein said cam lock operating portion is rotationally operated, has a substantially circular surface, and is formed with a belt-like groove extending in a substantially diametrical direction thereof, and said lock groove extends from said belt-like groove in a direction perpendicular thereto, wherein, when said cam portion is rotated to slide said actuator to provide said fitted state, said cam lock operating portion corotates in one direction so that said one end portion of said retaining spring engages with said lock groove, thereby to automatically lock said cam mechanism, and wherein, upon releasing said fitted state, said one end portion of said retaining spring is pushed in a direction opposite to a biasing direction toward a wall of said

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lock groove so as to release engagement between said retaining spring and said lock groove, then in the state, said cam lock operating portion is rotated in a direction opposite to said one direction using said belt-like groove, thereby to corotate said cam portion to release said fitted state.

Claim 15 (Original): The ZIF connector according to claim 14, wherein said cam lock operating portion has an operating position indicator showing an operating position of said cam lock operating portion, said insulator having, in the vicinity of said cam lock operating portion, logo portions representing a lock position and an unlock position.

Claim 16. (Currently Amended): The ZIF connector according to claim ~~12~~ 11 wherein the whole of said cam lock mechanism including said cam lock operating portion and said retaining spring is arranged so as not to project from the surface of said insulator.

Claim 17 (Original): The ZIF connector according to claim 11, wherein each of said first contacts comprises:
a stationary portion fixed to said insulator;

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a first portion having a first contact point and being continuous with said stationary portion;

a substantially U-shaped portion continuous with said first portion;

a second portion having a second contact point and being continuous with said substantially U-shaped portion, and said second contact point confronting said first contact point with a gap defined therebetween; and

a movable portion continuous with said second portion and engaging with said actuator, said first and said second portions being preformed to have intermediate portions, respectively, which are approached to each other to make said gap become small, wherein, when said cam portion is operated to slide said actuator, said actuator displaces said movable portions of said first contacts so that said first contact points and said second contact points sandwich therebetween said second contacts that are inserted in said gaps, respectively.

Claim 18 (New): The ZIF connector according to claim 1, wherein said first portion comprises a first <-shaped portion having an apex as said first contact point, said second portion comprising a second <-shaped portion having an apex as said

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second contact point, said first and said second portions further comprising guides, respectively, which are symmetrically formed outward from said first and said second contact points.

Claim 19 (New): A ZIF connector comprising an insulator, a contact held by said insulator, and an actuator slidably held by said insulator, said contact comprising;

a stationary portion fixed to said insulator;

a first portion having a first contact point and being continuous with said stationary portion;

a substantially U-shaped portion continuous with said first portion;

a second portion having a second contact point and being continuous with said substantially U-shaped portion;

a movable portion continuous with said second portion and engaging with said actuator, said first and said second contact points confronting each other with a gap left therebetween, said actuator sliding to displace said movable portion so that said first and said second contact points sandwich therebetween a connection counterpart that is inserted in said gap;

a cam portion rotatably held by said insulator and coupled to said actuator for moving said actuator relative to said

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insulator; and

a lock mechanism coupled to said cam portion for locking a fitted state where said connection counterpart is sandwiched between said first and said second contact points;

said lock mechanism comprising:

a cam lock operating portion formed integral with said cam portion and having a lock groove provided at a peripheral portion of said cam lock operating portion; and

a retaining spring held by said insulator for engaging with said lock groove in dependence on an operating position of said cam lock operating portion to prevent said cam lock operating portion from being moved to release said fitted state.